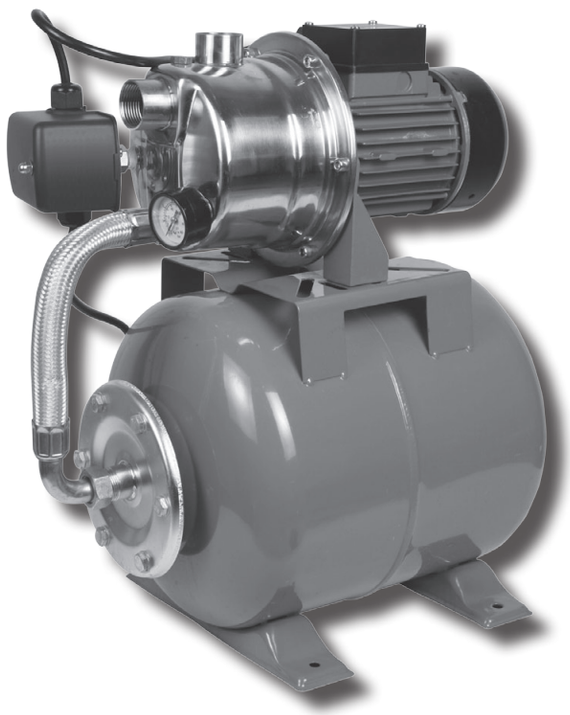
Owner's Manual & Safety Instructions

Save This Manual Keep this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures. Write the product's serial number in the back of the manual near the assembly diagram (or month and year of purchase if product has no number). Keep this manual and the receipt in a safe and dry place for future reference.

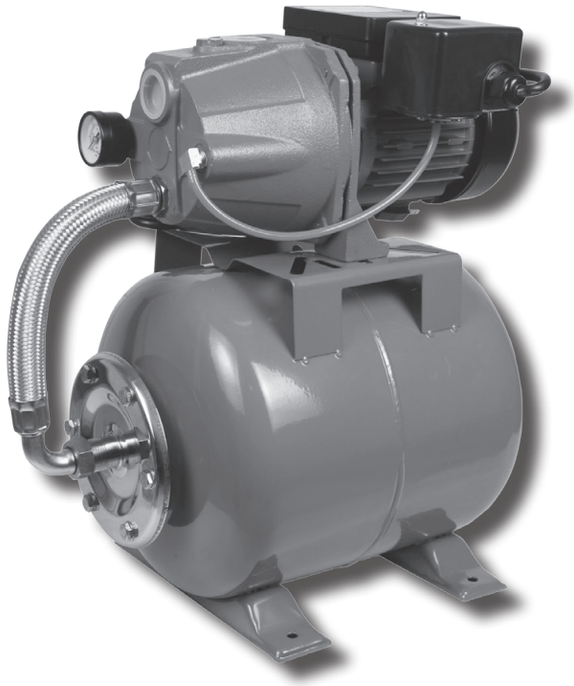
ITEM 69302 / 69305

PACIFICHYDROSTAR®

SHALLOW WELL PUMP



ITEM 69302



ITEM 69305

Visit our website at: http://www.harborfreight.com
Email our technical support at: tech@harborfreight.com

PUMP IS NOT SUBMERSIBLE

When unpacking, make sure that the product is intact and undamaged. If any parts are missing or broken, please call 1-800-444-3353 as soon as possible.

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No portion of this manual or any artwork contained herein may be reproduced in any shape or form without the express written consent of Harbor Freight Tools.
Diagrams within this manual may not be drawn proportionally. Due to continuing improvements, actual product may differ slightly from the product described herein.
Tools required for assembly and service may not be included.

⚠WARNING

Read this material before using this product. Failure to do so can result in serious injury. SAVE THIS MANUAL.

⚠WARNING

IMPORTANT! For your own safety – before starting to run the pump, please have the following items checked by an expert:

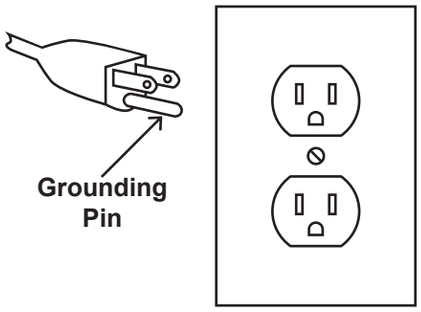
1. Risk of electric shock – This pump is supplied with a grounding conductor and grounding-type attachment plug. To reduce the risk of electric shock, connect only to a properly grounded, grounding-type receptacle.
2. Risk of electric shock – This pump has not been investigated for use in swimming pool areas.
3. The electrical connections must be protected from moisture.
4. If there is danger of flooding, the electrical connections must be taken to higher ground.
5. Circulation of caustic fluids, as well as the circulation of abrasive materials, must be avoided at all costs.
6. The pump must be protected from frost.
7. The pump must be protected from running dry.
8. Access by children should also be prevented with appropriate measures.
9. WARNING: Handling the Power Cord on this product will expose you to lead, a chemical known to the State of California to cause cancer, and birth defects or other reproductive harm. Wash hands after handling. (California Health & Safety Code § 25249.5, *et seq.*)
10. The warnings, precautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

Grounding Instructions

⚠WARNING

TO PREVENT ELECTRIC SHOCK AND DEATH FROM INCORRECT GROUNDING WIRE CONNECTION READ AND FOLLOW THESE INSTRUCTIONS:

Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded. Do not modify the power cord plug provided with the tool. Never remove the grounding prong from the plug. Do not use the tool if the power cord or plug is damaged. If damaged, have it repaired by a service facility before use. If the plug will not fit the outlet, have a proper outlet installed by a qualified electrician.



125 V~ 3-Prong Plug and Outlet (for up to 125 V~ and up to 15 A)

1. Tools marked with “Grounding Required” have a three wire cord and three prong grounding plug. The plug must be connected to a properly grounded outlet. If the tool should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user, reducing the risk of electric shock. **(See 3-Prong Plug and Outlet.)**
2. The grounding prong in the plug is connected through the green wire inside the cord to the grounding system in the tool. The green wire in the cord must be the only wire connected to the tool’s grounding system and must never be attached to an electrically “live” terminal. **(See 3-Prong Plug and Outlet.)**
3. The tool must be plugged into an appropriate outlet, properly installed and grounded in accordance with all codes and ordinances. The plug and outlet should look like those in the preceding illustration. **(See 3-Prong Plug and Outlet.)**
4. This pump is intended for use on a circuit that has an outlet that looks like the one illustrated above in **125 V~ 3-Prong Plug and Outlet**. The pump has a grounding plug that looks like the plug illustrated above in **125 V~ 3-Prong Plug and Outlet**.
5. The outlet must be properly installed and grounded in accordance with all codes and ordinances.
6. Do not use extension cords with this pump.
7. Do not use an adapter to connect this pump to a different outlet.

Specifications

Model	69302	69305
Electrical Rating	120V~ 60Hz 4.5A	120V~ 60Hz 4.5A
Inlet / Outlet Diameter	1 IN. NPT	
Maximum Flow	920 GPH	
Maximum Suction Lift	26 FT.	
Maximum Delivery Height	98 FT.	
Pump Body Material	Stainless Steel	Cast Iron
Air Bladder Pressure	23 PSI	
Start Pressure	20 PSI	
Stop Pressure	35 PSI	
Power Cord Length	6 FT.	

NOT FOR POTABLE WATER.

Note: Performance of this pump (if powered by line voltage) may vary depending on variations in local line voltage. Extension cord usage may also affect pump performance.

Before start-up, note the following: The pump can be connected to any shock-proof plug which has been installed according to regulations. The plug must have a supply voltage of 120V~, 60Hz.

CAUTION: This pump has been evaluated for use with water only.

Fluid Type: The Pump is designed for use with water with a maximum temperature of 77° F (25° C). Do not use the pump for other fluids, especially not fuels, cleaning fluids, or other chemical products.

Components

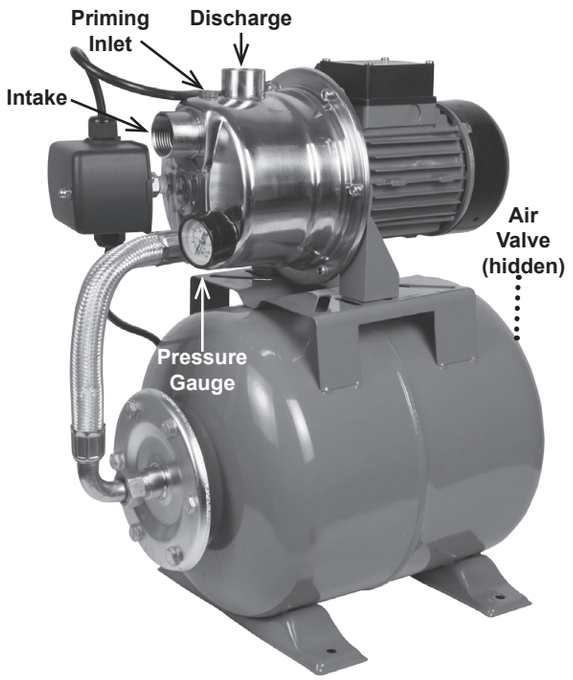


Figure A: 69302 Components

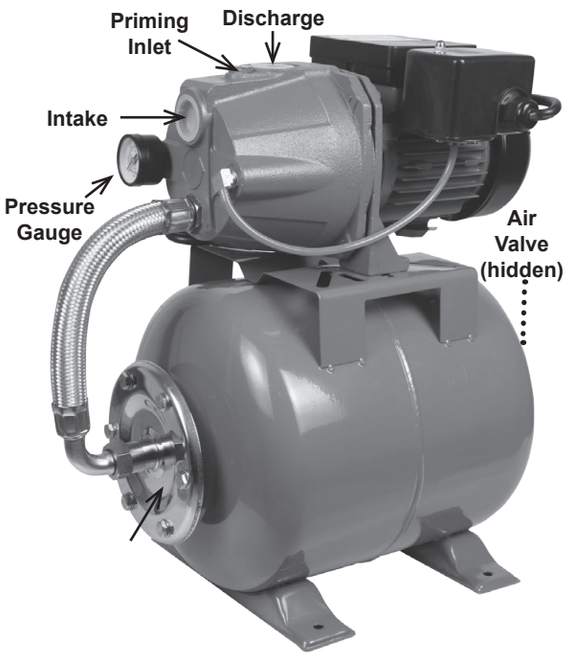


Figure B: 69305 Components

Installation

The well motor pump must be installed in a stationary position with a fixed pipeline and a steady water supply.

Please note!

1. Do not install the pump by suspending it unsupported from its delivery pipe. The pump must be placed on the bottom of the shaft.
2. The pump must be installed with an automatic float switch (not included) to prevent running dry.

Power Supply

1. The pump is equipped with a shock-proof plug according to regulations. The pump is designed to be connected to 120V~, 60Hz safety socket.
2. Make sure that the socket is sufficiently secured and is in excellent condition.
3. When the plug is inserted into the socket the pump will be on standby.

WARNING! If the power cord or plug is damaged, do not use the pump. The power cord or plug may only be repaired by a certified electrician.

Installation Considerations

This pump is designed for use as a well pump.

WARNING! TO PREVENT SERIOUS INJURY FROM ELECTRIC SHOCK:
Install indoors or in weather-proof well house only.
This Pump is non-submersible.
Do not plug in the power cord when wet or standing on damp or wet ground.
Do not plug in the power cord until instructed to do so.

NOTE:

a. ONLY pump clean water.
b. Additional components (such as valves and pipes) may be required for installation, but not included.
c. Installation requires skilled workmanship and compliance with local building codes. **If you are not confident in your ability to properly and safely install this pump, have a qualified technician perform the installation.**
d. The water to be pumped must be clean and must be free of sand and grit, which would damage the pump and void the warranty.

1. The illustration below shows an example of a proper shallow well pump installation. The total suction lift (vertical well lift + length of off-set line) must not exceed Maximum Suction Lift.

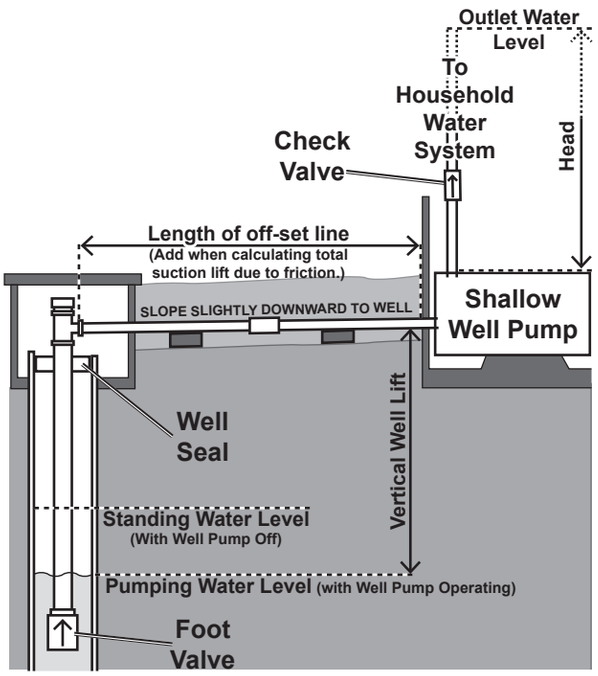


Figure C: Pump Setup Example

Note: This pump is intended for shallow well application only and is not intended to be used as a booster pump.

Note: For optimal performance, install the pump as close to the well head as possible.

2. Install a Foot Valve at the bottom of the suction pipe. The Foot Valve must be under the Pumping Water Level, the level that the water falls to when the pump operates.

3. Install a sterile Well Seal at the top of the suction pipe to keep the well clean. Protect from rust inside a frost-proof enclosure.

4. Intake and discharge pipes must be at least 1 IN. in diameter.

5. Lay an off-set line from the well to the structure the pump will be installed in. The off-set line should slope slightly towards the well (see Figure C). Systems with longer off-set lines should use larger diameter pipe to improve efficiency.

6. Install the pump on a rigid, level, dry platform. This platform must provide a solid, level surface that is capable of supporting the weight of the pump and attached piping filled with water. Do not allow water to contact the pump's housing.

CAUTION: DO NOT INSERT fittings into the Intake Hole farther than 1/2 IN.; this can DAMAGE the Pump, diminish Pump functions, and/or STOP water flow.

7. Keep the Head, the height that the pump discharge must push water before discharge, to a minimum. The Vertical Well Lift, Off-set Line Length, and Head added together must be less than Maximum Delivery Height to have flow at output. Effective flow decreases to 0 GPH as Maximum Delivery Height reaches its maximum.

8. For your protection, the power outlet used should have a Ground Fault Circuit Interrupter (GFCI). Have it installed by a qualified electrician. Keep power line away from water.

9. The inlet and discharge lines should not be wedged or stressed in a way that puts strain on the pump. Do not support the pump with the inlet or discharge lines.

Operation

1. The Compression Tank has a rubber bladder inside. This bladder must be pumped up to 23 PSI of air at all times. Use a bicycle pump (not included) to inflate the bladder. On the end of the Compression Tank opposite the inlet, is an air valve located under a cover. Remove the cover over the air valve and periodically monitor this air valve with an air pressure gauge to insure that the rubber bladder maintains the required air pressure.

2. Make sure the intake pipe is fully submerged before continuing.

3. **Before starting the pump for the first time, prime it as follows:**
   a. Fill the suction Pipe and Pump Body through the Priming Inlet.
   b. Close the Inlet after verifying that there are no leaks.
   c. Open the spigots, faucets and/or taps on the Delivery Pipe so that air can be release from the suction cycle.

4. This is a self-starting pump that uses a pressure switch. Once the power cord is connected, the pump can start at any time. **Do not handle or perform maintenance on the pump if the power cord is plugged in.**

5. After reading these instructions, consider the following points before starting the pump:
   a. Verify that the delivery pipe is properly connected.
   b. Verify that the electrical connection is 120V~, 60Hz.
   c. Verify that the electrical socket is in good condition.
   d. Verify that water and moisture cannot get near the power supply socket.
   e. Verify that the pump is installed so as to prevent running dry.

6. To begin pumping, plug in the power cord. When the line is pressurized, the pump will go to standby mode until the pressure falls below its starting pressure.

Maintenance

⚠WARNING

TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION:
Unplug the Pump from its electrical outlet before performing any inspection, maintenance, or cleaning procedures.

1. Clean the inlet screen on the intake port regularly to remove accumulated debris.
2. Wipe the pump clean with a soft, damp cloth with soapy water. Do not use solvents. Do not get the electrical components wet.
3. Drain water from pump before storage by disconnecting the water lines and turning the Pump upside down. If storing the pump for a long time, store it in a dry location, and apply a light layer of oil to the metal parts prior to storage, to inhibit rust. **Do not expose to freezing temperatures.**
4. After storage, check the Impeller to make sure it turns easily and is not oxidized.

Troubleshooting

Problem	Cause	Solution
The pump won't start	1. No power. 2. Pressure switch disconnected. 3. Thermal Protection cut out. 4. Blocked impeller.	1. Check connections, and breaker/fuse. 2. Check gauge. 3. Allow pump to cool. 4. Free the impeller.
The pump operates but it won't discharge water	1. Pump not primed. 2. Lift height exceeded. 3. Inlet tube not submerged. 4. Air in suction pipe. 5. Inlet screen clogged.	1. Prime pump. 2. Reduce lift height. 3. Submerge the inlet. 4. Check pipe and seals. 5. Clean screen.
Only a low volume of water flows	1. Inlet pipe is too small. 2. Liquid is too dirty. 3. Lifting height exceeded. 4. Tank's rubber bladder under-inflated. 5. Piping corroded, causing friction.	1. Increase pipe diameter. 2. Clean screen frequently. 3. Reduce lifting height. 4. Inflate to 23 PSI. 5. Replace piping, with plastic where possible.
Motor overheats often	1. Extension cord too long or wire size too small. 2. Pump cycling too often.	1. Eliminate use of extension cord or use shorter/heavier gauge cord. 2. Cut-in and cut-out pressure may be set too close together. Have the pressure switch adjusted by a qualified technician.
Pump/motor cycles rapidly	Cut-in and cut-out pressure may be set too closely.	Have the pressure switch adjusted by a qualified technician.
Tank bladder will not hold pressure	1. Air inlet valve is leaking. 2. Bladder is broken.	1. Check air tank for leaks using soapy water and replace bladder if needed. 2. Replace bladder.
Water pumps intermittently	Water level is being drawn below foot valve.	Lower foot valve.
Pump will not hold prime	1. Foot/check valve not installed in suction line. 2. Foot/check valve leaks water back to well.	1. Install foot and check valve in suction line. 2. Replace foot/check valve.

Follow all safety precautions whenever diagnosing or servicing the pump.
Disconnect power supply before service.
Do not disassemble the pump or motor as this will damage the water seals.
All repairs should be performed by a qualified technician.

Problem	Cause	Solution
Water is full of bubbles at outlet	1. Pumping bubbles temporarily as air is purged after initial setup.	1. Temporary self-remedying issue.
	2. Leak in suction side of pump system.	2. Check for and fix leaks.
	3. Well is gaseous.	3. Install a sleeve in the well.
	4. Water level below suction inlet of foot valve.	4. Lower suction line into water and re-prime. If water is deeper than Maximum Suction Lift, then a deep well pump may be needed.
Motor runs, but water is not pumping	1. Improper priming.	1. Prime the pump by pouring clean water into the Priming Inlet.
	2. Air leakage.	2. Check all pipes and joints in the suction line for air leakage using soapy water.
	3. Vertical lift too high.	3. Reduce vertical lift to within specifications. See Installation on page 4.
	4. Water level below suction inlet of foot valve.	4. Lower suction line into water and re-prime. If water is deeper than Maximum Suction Lift, then a deep well pump may be needed.
	5. Frozen pipes.	5. Thaw the pipes. Bury pipes below freeze line/insulate pipes.
	6. Foot valve in dirt or sand.	6. Raise foot valve to clean water level.
	7. Foot/check valve clogged.	7. Clean or replace foot/check valve.
	8. Pressure switch is set too low.	8. Have the pressure switch adjusted by qualified technician (20 PSI Start, 35 PSI Stop).
Pump does not shut-off	1. Pressure switch contacts welded together.	1. Have the pressure switch replaced by a qualified technician.
	2. Fixture (toilet, faucet, etc.) open or leaking.	2. Close or repair fixture.
	3. Impeller is clogged.	3. Clean impeller.
	4. Tank bladder pressure is too low.	4. Inflate to 23 PSI.
	5. Pipeline leakage.	5. Repair pipeline.
	6. Foot/check valve leaks water back to well.	6. Replace foot/check valve.

Follow all safety precautions whenever diagnosing or servicing the pump.
Disconnect power supply before service.
Do not disassemble the pump or motor as this will damage the water seals.
All repairs should be performed by a qualified technician.

PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS LIST AND ASSEMBLY DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER OR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT, OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS, AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

Record Product's Serial Number Here:_____

Note: If product has no serial number, record month and year of purchase instead.

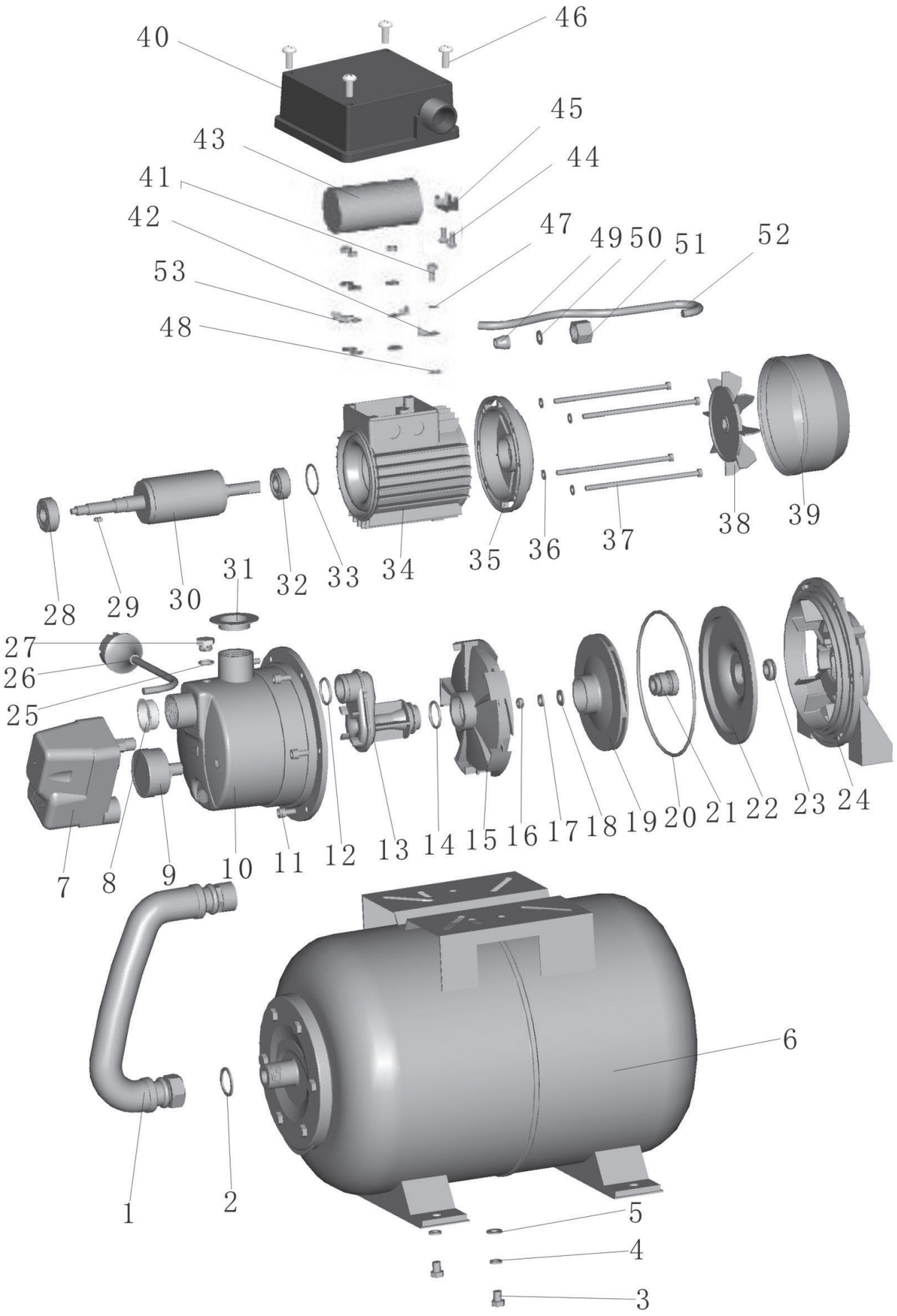
Note: Some parts are listed and shown for illustration purposes only and are not available individually as replacement parts.

69302 Parts List

Part	Description	Qty
1	Flexible Tube	1
2	Gasket	1
3	Hex Nut	2
4	Spring Washer	2
5	Plain Cushion	2
6	Tank	1
7	Pressure Switch	1
8	Dustproof Cover	1
9	Pressure Equipment	1
10	Pump Body	1
11	Hex Screw	6
12	O-Ring	1
13	Diffuser Assembly	1
14	O-Ring	1
15	Diffuser	1
16	Hex Nut	1
17	Spring Washer	1
18	Impeller	1
19	Impeller	1
20	O-Ring	1
21	Mechanical Seal	1
22	Pump Support Cover	1
23	Seal	1
24	Frame	1
25	O-Ring	2
26	Plug	1
27	Drain Plug	2

Part	Description	Qty
28	Ball Bearing	1
29	Shaft Key	1
30	Rotor	1
31	Cover	1
32	Ball Bearing	1
33	Wave Spring	1
34	Motor Stator	1
35	End Plate	1
36	Washer	4
37	Hex Screw	4
38	Fan	1
39	Fan Cover	1
40	Terminal Box	1
41	Screw	1
42	Connection Knob	8
43	Capacitor	1
44	Self-Driving Screw	2
45	Cord Clip	1
46	Screw	1
47	Spring Washer	1
48	Gasket	1
49	Seal Sheath	1
50	Sealing Washer	1
51	Screw Cap	1
52	Power Cord	1
53	Connection Knob	3

69302 Assembly Diagram

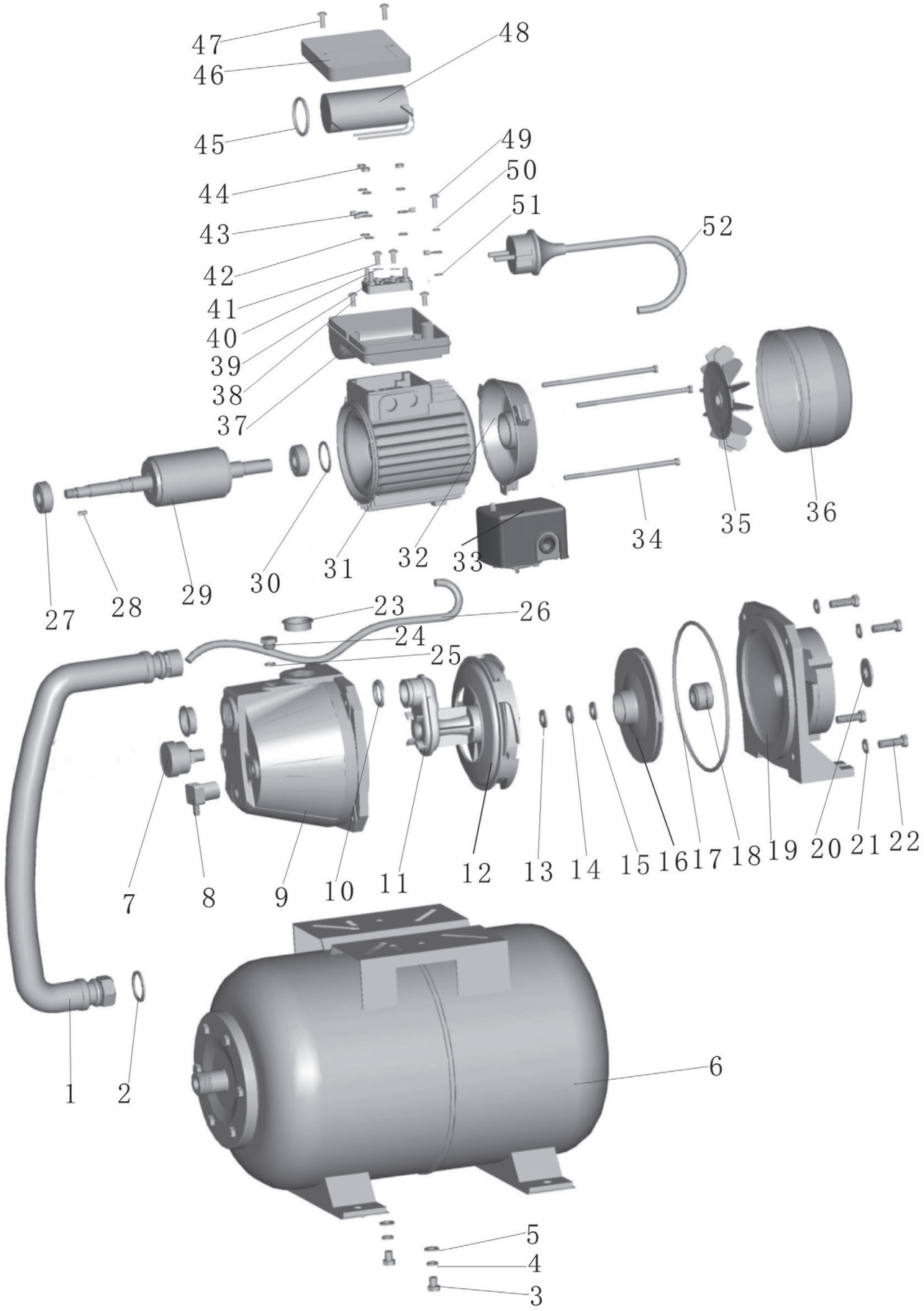


69305 Parts List

Part	Description	Qty
1	Flexible Tube	1
2	Gasket	1
3	Hex Screw	2
4	Spring Washer	2
5	Gasket	2
6	Tank	1
7	Pressure Switch	1
8	Brass Elbow	1
9	Pump Body	1
10	O-Ring	1
11	Interval Channel	1
12	Diffuser Baffle	1
13	Hex Nut	1
14	Spring Washer	1
15	Gasket	1
16	Impeller	1
17	O-Ring	1
18	Mechanical Seal	1
19	Pump Support	1
20	Waterproof Ring	1
21	Gasket	4
22	Hex Screw	4
23	Dustproof Cover	2
24	Filling Plug	2
25	O-Ring	2
26	Flexible Tube	1

Part	Description	Qty
27	Ball Bearing	2
28	Shaft Key	1
29	Rotor	1
30	Wave Spring	1
31	Motor Stator	1
32	End Plate	1
33	Pressure Switch	1
34	Hex Screw	3
35	Fan	1
36	Shell	1
37	Terminal Box	1
38	Screw	4
39	Terminal Board	1
40	Gasket	2
41	Screw	2
42	Plain Cushion	9
43	Connection Knob	8
44	Hex Nut	6
45	O-Ring	1
46	Terminal Cover	1
47	Self-Driving Screw	2
48	Capacitor	1
49	Screw	1
50	Spring Washer	1
51	Gasket	1
52	Cable	1

69305 Assembly Diagram



Limited 90 Day Warranty

Harbor Freight Tools Co. makes every effort to assure that its products meet high quality and durability standards, and warrants to the original purchaser that this product is free from defects in materials and workmanship for the period of 90 days from the date of purchase. This warranty does not apply to damage due directly or indirectly, to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, criminal activity, improper installation, normal wear and tear, or to lack of maintenance. We shall in no event be liable for death, injuries to persons or property, or for incidental, contingent, special or consequential damages arising from the use of our product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.

To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection verifies the defect, we will either repair or replace the product at our election or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

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